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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/490,189	01/24/2000	Jeffrey A. Masucci	2736.1002000	6852

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GENERAL INSTRUMENT CORPORATION DBA THE BROADBAND
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EXAMINER	
ABELSON, RONALD B	
ART UNIT	**PAPER NUMBER**
2666	18

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/490,189	MASUCCI, JEFFREY A.	
	Examiner	Art Unit	
	Ronald Abelson	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,6,7 and 9* is/are rejected.

7)☒ Claim(s) *3,5,8 and 10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 January 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☑ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 4, 6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ovadia (US 6,546,557) in view of Fawaz (US 6,654,374), further in view of Nash (US 4,577,312).

Regarding claims 1 and 6, Ovadia teaches a method of communicating between a burst manager (fig. 1a box 10) and plural remote terminals (fig. 1a box 12a-c).

The system comprises transmitting redundant burst data from the plural remote terminals (fig. 1a box 12a-c) to the burst manager (fig. 1a box 10).

Although Ovadia teaches Sonet, the reference is silent on a first passive optical network (PON) and a second PON, each PON having a downstream portion and an upstream portion and transmitting burst data from the plural remote

terminals over both upstream PON portions, as specified in claims 1 and 6; the first and second PONS are configured as counter-rotating quasi-rings, as specified in claims 4 and 9.

Fawaz teaches, in Sonet, a first passive optical network (PON) and a second PON, each PON having a downstream portion and an upstream portion and transmitting burst data from the plural remote terminals over both upstream PON portions (dual ring, simultaneously send clockwise and counter-clockwise, col. 13 lines 8-12), as specified in claims 1 and 6; the first and second PONS are configured as counter-rotating quasi-rings (col. 13 lines 8-12), as specified in claims 4 and 9.

Therefore it would have been obvious to one of ordinary skill in the art, having both Ovadia and Fawaz before him/her and with the teachings [a] as shown by Ovadia, a method of communicating in Sonet between a burst manager and plural remote terminals, and [b] as shown by Fawaz, a first passive optical network and a second PON, each PON having a downstream portion and an upstream portion and transmitting burst data from the plural remote terminals over both upstream PON portions (dual ring,

simultaneously send clockwise and counter-clockwise, to be motivated to modify the system of Ovadia by transmitting the burst data from the primary hubs to the headend simultaneously using both rings. This would improve the system by providing for the reception of data at the master headend in case data transmitted on a single ring is not received.

Although the combination teaches transmitting duplicate data over two PON's, the combination is silent on how the master headend synchronizes the transmission so the data traveling in each direction will arrive at simultaneously at the master headend.

Nash teaches transmitting a common synchronization signal (test pattern, col. 4 lines 12-15) from the burst manager (fig. 1 box 123) to the plural remote terminals over both downstream portions; the burst data for each remote being delayed wherein the ranging delays for each remote terminal are adjusted with respect to the common synchronization signal such that the burst data for any particular remote terminal transmitted on the first path arrives at the burst manager simultaneously with the redundant burst data for that particular remote terminal

transmitted on the second path (col. 3 line 61 - col. 4 line 23).

Therefore it would have been obvious to one of ordinary skill in the art, having both the combination of Ovadia and Fawaz and Nash before him/her and with the teachings [a] as shown by the combination of Ovadia and Fawaz, a method of communicating in Sonet between a burst manager and plural remote terminals, and [b] as shown by Nash, transmitting a common synchronization signal from the burst manager to the plural remote terminals over both downstream portions; the burst data for each remote being delayed wherein the ranging delays for each remote terminal are adjusted with respect to the common synchronization signal such that the burst data for any particular remote terminal transmitted on the first path arrives at the burst manager simultaneously with the burst data for that particular remote terminal transmitted on the second path, to be motivated to modify the system of the combination of Ovadia and Fawaz by transmitting a common synchronization signal from the master headend to each hub in both directions. This would improve the system by allowing for the master headend to synchronize the reception of data from each primary hub along both rings.

3. Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ovadia, Fawaz and Nash as applied to claims 1 and 6 above, and further in view of de Boer (US 6,616,350).

Although Ovadia teaches Sonet, the reference is silent on TDM.

De Boer teaches Sonet incorporates TDM.

Therefore it would have been obvious to one of ordinary skill in the art, having both the combination of Ovadia, Fawaz and Nash and de Boer before him/her and with the teachings [a] as shown by the combination of Ovadia, Fawaz and Nash, a method of communicating in Sonet between a burst manager and plural remote terminals, and [b] as shown by de Boer, Sonet incorporates TDM, to be motivated to modify the system of the combination of Ovadia, Fawaz and Nash by transmitting the common synchronization signal in a TDM format. Subscribing to the Sonet format can perform this modification. This would improve the system since the TDM format is standardized for Sonet and using a standardized format will allow the system to be incorporated into larger systems.

Allowable Subject Matter

4. Claims 3, 5, 8, and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 3 and 8, although the combination teaches Sonet TDM and a common synchronization signal nothing in the prior art of the record teaches or fairly suggests determining which timeslots contain valid data and selecting valid data on a per timeslot basis, in combination with all the other limitations listed in the claim.

Regarding claim 5 and 10, nothing in the prior art of the record teaches or fairly suggests uni-directional quasi-rings, in combination with all the other limitations listed in the claim.

Prior art is of record

5. The prior art is of record but not relied upon in the office action. Couch (US 20030219254) teaches Sonet is a passive optical network.

Response to Arguments

6. Applicant's arguments filed 3/25/2004 have been fully considered but they are not persuasive.

The examiner disagrees with the applicant that Nash taken with Ovadia and Fawaz does not teach the invention as claimed in claims 1 and 6 (applicant: pg. 6 3rd paragraph). The applicant contends that Nash does not teach the concept on introducing a delay in selected channels so that data arrives at a location simultaneously. The examiner disagrees. As shown in the previous office action, Nash clearly teaches this concept (Nash: col. 3 line 61 - col. 4 line 23). Nash explicitly states, "As a result of these different routes being used, information on certain channels may be delayed with respect to information sent in the same time frame over other channels. To compensate for this, network services complex measures the delay in each channel and inserts the necessary delay in some of the channels so that all information transmitted over a plurality of narrow-band channels from one terminal during one time frame is received in one time frame for all channels at the receiving terminal".

The applicant reiterates his position that Nash does not teach or suggest data a method for data arriving simultaneously at the burst manager coming from two different routes (applicant: pg. 7 lines 6-9). This argument has been addressed in the prior paragraph.

The applicant states "In contrast with the intermediate insertion of delay of Nash, for the present invention delay is adjusted at the source". However, the limitation of adjusting the delay at the source is not in the claims.

The applicant further argues that Nash does not teach "transmission of redundant data along two paths such that it arrives simultaneously at the burst manager" (applicant: pg. 7 lines 14-15). As shown in the prior office action, Fawaz teaches "transmission of redundant data along two paths" (dual ring, simultaneously send clockwise and counter-clockwise, col. 13 lines 8-12). As previously stated, Nash was relied on to teach the concept of introducing a delay such that data arrives simultaneously at a given location from multiple paths.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (703) 306-5622. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

Ronald Abelson
Examiner
Art Unit 2666

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Seema S. Rao
SEEMA S. RAO 6/14/04
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600